# *MESMER*: Towards a Playful Tangible Tool for Non-Verbal Multi-Stakeholder Conversations

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## ABSTRACT

In this paper we present *MESMER*, a work-in-progress tangible conversation tool for playful design. Our work extends the Otherworld Framework (OF) [7] for tangible tools by centering specifically on play as a conversation topic. Here we unpack how early experiments with OF motivated our work and describe the current iteration of the MESMER tool, which comprises persona cards, various boards, and a shared physical token. MESMER is inspired by our findings from early trials with OF: *performative playful interaction promoted playful and divergent thinking*; *embodied non-verbal communication led to shared insights, the board's contents and structure helped scaffold conversations*, *a diversity of personas and narratives seemed desirable*, and *role-playing personas encouraged multi-stakeholder empathy*. Our ongoing research aims to help designers and researchers to facilitate engaging, fruitful and inspiring conversations where diverse stakeholders can contribute to playful technology design.

## CCS CONCEPTS

• Human-centered computing~Interaction design~Interaction design concepts and methods

## KEYWORDS

Play; Tangible Conversation Tools; Participatory Design.

## 1 Introduction

Many situations in our daily lives have an intrinsic *playful potential*. The affordances of the objects we use, the features of our social interactions and the framing of the situation itself are often susceptible to having a "playful charge". At any moment, the right combination of events can spark play: a joke, a little teasing, or just some uncontainable laughter. The emergence of play can positively reframe how we relate with our environment. For this reason, play has become a key topic in HCI, and researchers investigate how to use its potential to enrich situations that have traditionally been considered non-playful (e.g. [1][11][13][17]). Works in this space often face a common challenge: how can we design for play that *enriches* non-play activity without disrupting it completely?

The Situated Play Design (SPD) [1] approach addresses this challenge by focusing on chasing *play potentials*—i.e. "existing manifestations of contextual play—to inspire play design. The novelty of SPD is the proposal of building on forms of playful engagement that emerge naturally in mundane situations—thereby enriching, rather than disrupting, those situations by realizing their playful potential.

While we believe that SPD points in the right direction, there still are methodological gaps in this space [3]. Here we focus on one of them: *the lack of tools that help designers facilitate multi-stakeholder conversations about people's taste for play*. Tangible tools have long been used by designers and researchers to facilitate conversations. Yet, they generally address conversation topics other than play (e.g. innovation [9] or leadership [10]) and focus more on stakeholders' pragmatic needs rather than on their play(ful) desires. Even those tools that *use* play to foster discussions usually support design goals that are not ludic (e.g. [12][16]).

Facilitating discussions about a phenomenon as ephemeral and elusive as play can be hard: we lack a robust language for the aesthetic experience of play [14] and actionable mechanisms to facilitate conversations about it. Because of that, we argue that we could use new tangible conversation tools that focus directly on play and playfulness and help designers to identify play potentials.

**Figure 1: The Ouija Board.**

*MESMER,* our work-in-progress tangible tool, responds to this need.

## 2 From the *Otherworld Framework* to *MESMER*

*MESMER* is an extension of the *Otherworld Framework* (OF) for tangible conversation tools [7]. OF repurposes the Ouija Board [6] (Figure 1)—a popular game used for "connecting with the dead"—as a resource for design. The game consists of a board with letters and numbers and a token that moves around it—seemingly on its own but in fact triggered by people's subtle hand movements—tracing messages "sent by spirits". We hypothesized that such embodied and non-verbal communication mechanism might add value in design, enabling novel forms of collective exploration and expression of nonconscious thoughts. Originally, OF did not target play design *per se*; it was rather meant to support generic design explorations. Yet, pilot trials showed that its underlying mechanisms might be particularly useful in design projects targeting play. Here we describe two trials that motivated our decision to transform OF into a play-focused conversation tool. In one of them, 4 participants (an engineer, a sociologist, a film distribution coordinator, and a designer-facilitator) ideated interactive garments by summoning the spirit of Jackson Pollock through a custom board inspired by his art (Figure 2). In another one, 3 participants (a semiotician, an engineer, and a designer-facilitator, all Marie Curie Fellows) summoned the spirit of Marie Curie through an emoji-based board to ideate playful wearables (Figure 3). Here we highlight key findings from those trials that motivate us to extend OF into a play-focused multi-stakeholder conversation tool.

**Finding 1 (F1): Performative playful interaction promoted playful and divergent thinking.** The emergent and performative playfulness afforded by OF affected our ideation process. As an intriguing and enigmatic activity, it enabled a playful atmosphere where we felt safe to create and share seemingly crazy ideas. For example, in the first study, discussions



**Figure 2: The first pilot study used a board inspired by abstract art. Each circle corresponds to the spot where the token (small jar in the left corner) stopped after each question, and which the participants interpreted as Pollock's "answer".**

after token movements generated keywords (e.g. dark, forest, rabbit) that influenced subsequent questions and the ideation flow (e.g. "He is in a dark forest with animals"), promoting lateral thinking. An example is one of the ideas that came up in our interactive garments brainstorming session: a pair of jeans made of moss. Though we were not aware of moss' properties, the OF board enabled us to speculate on its possible uses and motivated further exploration. We later found that moss has remarkable liquid absorbing qualities, a relevant fact that may have been ignored had we not allowed space for speculation. OF elicited the intrinsic playfulness of the brainstorming conversation, brought about experimentation and spontaneity, and helped us to diverge from mainstream technology concepts—which we argue is a
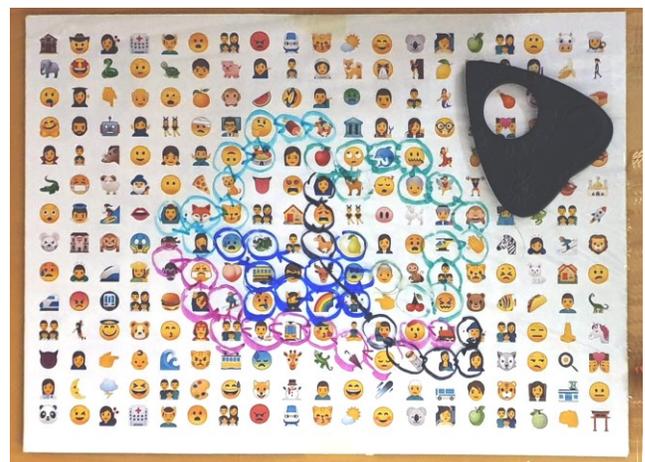


**Figure 3: The second pilot study used a board featuring emojis. Colored circles highlight the emojis where the token stopped after each question, and which the participants interpreted as Curie's "answers".**

desirable move in playful design.

**F2: Embodied non-verbal communication led to shared insights.** In both studies, we saw that the tool's subtle, embodied, ambiguous, and non-verbal communication mechanism could balance negative power structures that emerge as people talk; create a safe space where no one feels the urge to commit to ideas; and dilute the sense of personal ownership to the benefit of collective insights. Such conversation form might also disrupt notions of expertise, e.g. mitigating people's fear of being perceived as stupid by others.

**F3: The board's contents and structure helped scaffold conversations.** The board's contents helped to structure the sessions and focus conversations, e.g. incorporating relevant design concepts. For example, in the second study, we built on an existing framework for playful wearables [8] to ask questions such as: "How does the wearable help you to communicate: through your body, using verbs, or symbols?". That helped us to scaffold the discussion and navigate between abstract and concrete ideas. Future iterations of the tool might benefit from including different boards that focus and scaffold different parts of the conversation.

**F4: A diversity of personas and narratives seemed desirable.** In both studies we realized that while the original Ouija narrative was compelling for some, it made others skeptical. A more flexible, less mystical narrative might better accommodate a more diverse set of participants, contexts, and design goals. We decided that future iterations of the tool should also include realistic personas in order to appeal to those who might feel uncomfortable with the Ouija's mysticism. We also determined that a clear explanation of the rationale behind the board, its inspirational use, and the facilitator's role should be offered to participants.

**F5: Role-playing personas encouraged multi-stakeholder empathy.** Summoning external figures created a shared lens for discussion and enabled role-playing other people's ideas. For example, in the second study, pretending to be communicating with Curie's spirit affected our questions and subsequent interpretation of "her answers", e.g. assuming that she was a straightforward and ironic woman, when the  ,  and  emojis were highlighted, we concluded the session assuming Curie was "*hungry*" and left riding her "*horse*". Role-playing external personas might help people empathize with the perspectives of stakeholders who are not present, human and beyond. To better encourage multi-stakeholder empathy, we decided that future versions of the tool would use role-playing of non-present personas as a central part of the activity.

## 3 The Work-in-Progress *MESMER* Tool

*MESMER*, the next iteration of our tool, extends the Otherworld Framework by focusing conversations specifically on play and playfulness. Building on the pilot trials findings, we kept the core interaction mechanics behind OF (F1&2) but reframed the activity to include non-spiritual themes (F4) and allow participants to role-play any relevant stakeholder (F5). We also added structure to the activity (F3) through a set of boards targeting diverse themes, e.g. to focus directly on playfulness, one of the boards features play design concepts. Below we describe the work-in-progress version of MESMER.

Let us imagine that a design researcher decides to use MESMER to facilitate a multi-stakeholder conversation about the potential of technology to playfully augment the public spaces of a city. The conversation begins as one of the participants, the owner of a popular coffee shop, pulls a card from a deck which assigns a persona to her: a homeless person. Importantly, the cards feature different personas, curated to be relevant to the targeted design scenario. They include both humans, other living things (e.g. a bird, or a tree), spirits of relevant historical characters (e.g. a former mayor), and inanimate things (e.g. a light pole, or a playground). Once the participant is assigned her new identity, which will be visible to everyone, the other participants can start interviewing her.

In the current version of the tool, conversations involve 4 phases, each with its dedicated answer board—these phases can be seen in the hypothetical MESMER session illustrated in Figure 4. The conversation begins with a board featuring general prompts (e.g. yes, no, maybe...) and letters; participants can ask questions to familiarize themselves with the role-played persona (in this case, a homeless person). Following, they move on to a mood board with photos of city landscapes conveying diverse emotions; they can use it to investigate the persona's own experiences in, and ideas about, the city. Next, participants use a board that includes a list of playful experiences inspired by [4] and [5]; they can use it to discuss the persona's playful desires. The interview concludes with a fourth board that is completely blank; participants can draw and write on it to improvise custom questions and answers.
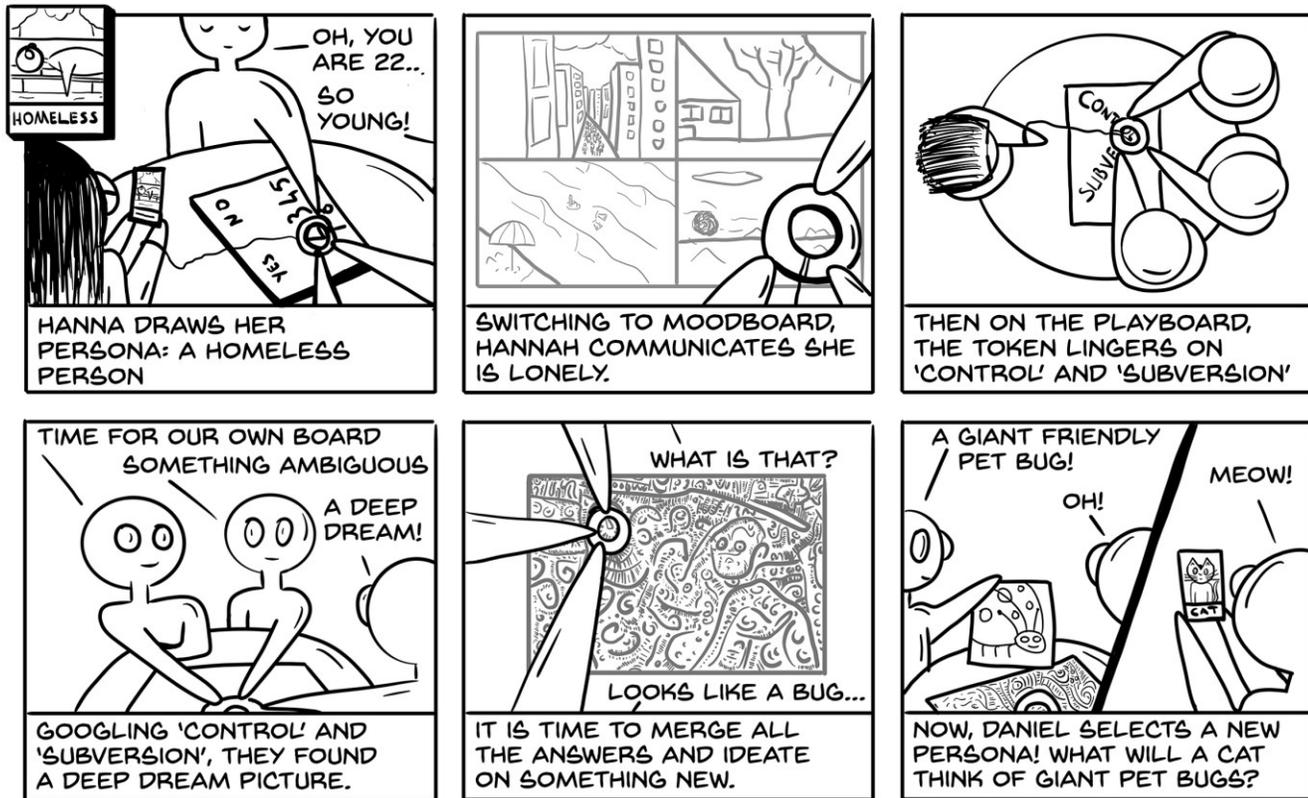
**Figure 4: A hypothetical MESMER session, part 1. A digital template for assembling the tool can be accessed at: https://bit.ly/2Qa9YzX**

Importantly, in the interaction between interviewers and interviewee, MESMER privileges non-verbal communication. To get answers from the interviewee—in this case, the coffee shop owner role-playing a homeless person—participants use their fingertips to collaboratively move a token around the board, reaching the available answer prompts. The interviewee can influence those moves, e.g. by pulling a thread that is attached to the token. We are in the process of experimenting with alternative ways for interviewees to participate, with no conclusive results yet. The activity is thus a game of empathizing with the interviewee's thinking, understanding their subtle non-verbal cues, and guessing an answer that satisfies all parties. If the interviewee feels that their desires are not taken care of well enough, she can pull the token outside of the board, in which case the interview will be over, and another participant will be invited to draw a persona card.

## 4   Conclusion and Future Work

*MESMER* is a work-in-progress tangible tool aimed at facilitating multi-stakeholder conversations about play and playfulness. Building on an existing method of our own work, the *Otherworld Framework*, it uses subtle, embodied, non-verbal, and playful interaction as the main communication form. Here we presented our work-in-progress tool to open it up to the ideas of fellow design researchers and play scholars and to learn how it may support their work. Moving forward, we will iterate on the current prototype through follow-up experiments: by inviting stakeholders to use MESMER with us, and we will further develop and refine both the tool and the underlying use protocol. Once we determine that a robust version of MESMER is ready to be evaluated, we will conduct a user study to assess its usefulness. To do that, we will use the tool in some of our design research projects to examine the extent to which it supported the projects' design goals. To measure that, we will (1) video-record, and later on study, participants' behaviour in the MESMER sessions, and (2) interview them about their perceptions of how using MESMER enabled them to creatively contribute to the design work. Overall, with this research, we work towards providing a tangible conversation tool that empowers playful interaction designers and researchers to facilitate fruitful, engaging, and inspiring conversations where diverse stakeholders can contribute to the co-design of playful technologies and experiences.

## Acknowledgements

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